PRELIMINARY

PCnet™-*FAST III*-KT

Am79C973-Based Evaluation Kit for PCI Systems

DISTINCTIVE CHARACTERISTICS

- **Based on the PCnet-*FAST III* (Am79C973) single-chip 10/100 Mbps Ethernet Controller**
- **Implements a fully functional 10/100 Mbps Ethernet node for a PCI-based system**
- **Supports ACPI/OnNow power management and Magic Packet™ remote wake-up and power-on**
- **Software compatible with all PCnet Family members**
- **Software drivers support all popular Network Operating Systems**
- **Includes Evaluation Board, AMD Networking CDROM, and supporting documentation**

GENERAL DESCRIPTION

The PCnet-*FAST III*-KT evaluation kit is a design evaluation vehicle for the Am79C973 PCnet-*FAST III* Ethernet controller. The kit includes an evaluation board with the Am79C973 Ethernet controller and is designed for 10BASE-T or 100BASE-TX media.

The evaluation board, when installed in a PCI-based host system, provides a platform for demonstrating the high performance of the PCnet-*FAST III* device and the low manufacturing cost of a PCnet-*FAST III* based solution. The platform further allows the user to evaluate the network hardware and to develop software for an Ethernet node based on the PCnet-*FAST III* device.

The PCnet-*FAST III* evaluation board supports ACPI/OnNow power management and AMD's patented Magic Packet™ technology for remote wake-up and power-on. The board supports power management and remote wake-up via the PCI bus using the PME pin, or by using the 3-pin WOL connector and cable that is included in this kit. This functionality requires a system or motherboard that provides auxiliary power and remote wake-up functions.

In addition to the evaluation board, the kit comes with the AMD Networking CD-ROM, a hardware user's manual, the *PCnet Family Network Driver Installation Guide*, the Am79C973 data sheet, board schematics and Bill of Materials, and instructions for testing the Magic Packet remote wake-up technology.

The software includes driver object codes for Novell NetWare ODI DOS and OS/2, NetWare Server, Microsoft Windows NT, Windows 95, Window 98, Windows CE, Windows for Workgroups, LAN Manager, Banyan VINES Client, IBM LAN Server, SCO UNIX, Artisoft LANtastic/AI, DEC Pathworks, and Packet Driver. Also included are utility programs for configuration of the network adapter card EEPROM configuration, diagnostics, and Magic Packet wake-up.

No hardware jumpers are required for configuration. The PCI system BIOS automatically configures on power up, the I/O Base Address, interrupt channel, and DMA channel for the PCnet-*FAST III*-based Ethernet adapter card. In addition, AMD provides a low-level evaluation program to establish connections, and send and receive messages. The evaluation program allows the user to view and change the contents of the PCnet-*FAST III* registers, the memory resident Initialization Block, and the data buffer Descriptor Rings. The program also allows the designer to establish loops for hardware probing.

The PCnet Family Configuration and Installation utility program, *AMINSTAL*, provides an easy user interface to view the configuration of the PCnet-*FAST III* evaluation board. The utility program automatically scans the system bus(es), which may include ISA, VL, and PCI to find the installed PCnet-ISA, PCnet-ISA+, PCnet-ISA II, PCnet-32, PCnet-PCI, PCnet-PCI II, PCnet-*FAST*, PCnet-*FAST+*, and PCnet-*FAST III* devices. With the configuration portion of the program, the utility will find and report to the user the I/O address, IRQ channel, and DMA channel assigned to the PCnet-*FAST III* device by the system BIOS. After configuration, the user may use the utility to create or modify the CONFIG.SYS, AUTOEXEC.BAT, and PROTOCOL.INI OR NET.CFG files on the user's system.

The PCnet-*FAST III* evaluation board stores the unique IEEE physical address in the serial EEPROM. Once powered up, the Am79C973 device reads the node's IEEE physical address from the EEPROM through the Microwire interface protocol. For more details about the PCnet-*FAST III* Ethernet Controller also refer to the *Am79C973 PCnet-FAST III* data sheet (PID #21510D).

Trademarks

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